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Office of River Protection, State of Washington Department of Ecology
Change Notice

1. Document Title and Number: RPP-12711, Rev. 6-L "Temporary Waste Transfer Line Management Program Plan" and RPP-12711, Rev. 6-M "Temporary Waste Transfer Line Management Program Plan".		
2. Minor Field Change: □ Yes: (WRPS Signature Only - Attach signed form) X No: Proceed to Box 3	**3.** Document Issue Date: 06/04/2014 **4.** Document Modification Notice Date: 06/16/2014	**5.** Notice Number: 2014-03 RECEIVED JUN 27 2014 EDMC
6. Do proposed changes require significant schedule changes? □ Yes X No	**7.** Do proposed changes include specific additions, deletions, or modification to scope and/or requirements which affect the overall intent of the plan? □ Yes X No	**8.** (Check only one box) □ Significant Modification (Check if the answer to question in either section 6 or 7 is "yes". Significant modifications require revision of the document.) Minor Modification X Requires modification of the document X Can be accomplished with Modification Notice.
9. Description and Justification of Change: **Change Description:** RPP-12711, Rev. 6-L updated to reflect installation of ERSS at C-111. RPP-12711, Rev. 6-M updated to include leak detection times and removes TBD. Changes are limited to Tables A-1 & A-2. **Justification:** These changes are required by the plan. See attached page changes.		
10. Impact of Change: None.		
11. Additional Requirements and/or Provisions[1]:		
Approvals		
Washington River Protection Solutions, LLC.	Office of River Protection	State of Wash., Dept. of Ecology
□ Provisional Approval[2] Date	□ Provisional Approval[2] Date	□ Provisional Approval[2] Date
□ Final Approval Date Ruth Allen 6/17/14	□ Final Approval Date 6/17/14	☒ Final Approval Date 6/27/14

Notes

1 - For use by Ecology to identify any additional information needed to make a decision regarding the request for modifications. In addition, Ecology will identify actions, if any, regarding the modification request that DOE may take pending Ecology's final decision

2 - Provisional approval allows DOE and it's contractors to take specific actions identified in section 11, prior to final approval of this modification.

WMA-C

Temporary Waste Transfer Line Management Program Plan

Author Name:
JM Rubio
ARES Corporation for Washington River Protection Solutions, LLC
Richland, WA 99352
U.S. Department of Energy Contract DE-AC27-08RV14800

EDT/ECN: 13-000226 UC:
Cost Center: Charge Code:
B&R Code: Total Pages: 5

Key Words: Transfer Line, Hose in Hose Transfer Line, HIHTL, Management Program, Leak Detection

Abstract: This plan defines a program to ensure temporary waste transfer routes are managed in a manner that ensures compliance with environmental regulations. Appendix A contains an evaluation of the methods and sensitivity of leak detection associted with temporary waste transfer lines. Appendix B describes waste handiling and waste minimization for HIHTLs. Appendix C describes flushing, draining and removal of HIHTLs. Appendix D describes HIHTL service life extension considerations.

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APPROVED
By marguerite washington at 3:29 pm, Sep 03, 2013
Release Approval Date

DATE:
Sep 03, 2013
HANFORD RELEASE
Release Stamp

Approved For Public Release

Tank Operations Contractor (TOC) **RECORD OF REVISION**	(1) Document Number: RPP-12711	Page 1

(2) Title:

Tempory Waste Transfer Line Management Program Plan

Change Control Record

(3) Revision	(4) Description of Change – Replace, Add, and Delete Pages	Authorized for Release	
		(5) Author. (print/sign/date)	(6) Resp. Mgr. (print/sign/date)
0	Original Release EDT-635924	SL Swaney	TM Horner
1	Direct Rev – ECN-720231-R0	SL Swaney	TM Horner
2	Direct Rev – ECN-721019-R0 Incorporates ECNs 672973, 672974, 7202920-R0, 720544-R1 and 720665-R0	SL Swaney	MJ Sutey
2A	Direct Rev – (Page Change) – ECN-721019-R1; Incorporates changes to the C-200 series tanks.	DG Baide	WT Thompson
3	Direct Rev – ECN-721019-R3; Incorporates ECN-721019-R2 and includes C-200 and U-200 HIHTL configuration modification.	DG Baide	WT Thompson
3A	Direct Rev – (Page Change) – ECN-721019-R4; Incorporates information not previously recorded from ECN-720655-R0.	PF Kison	WT Thompson
3B	Direct Rev – (Page Change) – ECN-722908-R0; Add C-103 Transfer Route Information.	JR Bellomy	WT Thompson
3C	Direct Rev – (Page Change) – ECN-722908-R1; Update C-03B Leak Rate based upon testing.	JR Bellomy	WT Thompson
3D	Direct Rev – (Page Change) – ECN-723678-R0; Update Rad Requirements	DB Parkman	WT Thompson
3E	Direct Rev – (Page Change) – ECN-723966-R0; Update pages A-21, A-23 and A-39 to show Vacuum Return HIHTL.	DB Parkman	WT Thompson
3F	Direct Rev – (Page Change) – ECN-723881-R0; Adds Page A-23C, A-23D and A-36C. NOTE: Pages A-23A, A-23B, A-36A and A-36B have already been added by ECN-722908-R1.	RS Robinson	WT Thompson
3G	Direct Rev. - (Page Change) – ECN-724101, R2; Update information from removal of SY/PPP HIHTL	MH Brown	CW Jorgensen
3H	Direct Rev. - (Page Change) – ECN-723881-R1; Update pages A-23C and A-36C (Ref. ECN-723881-R0) to reflect new location of POR104 leak detector.	JR Bellomy	WT Thompson
3I	Direct Rev. - (Page Change) – ECN-724610-R0; Adds pages A-23E & F and A-36D to reflect waste retrieval of C-109.	JR Bellomy	WT Thompson
3J	Direct Rev. – (Page Change) – ECN-725247-R0; Revises page A-5 and adds Appendix D to allow HIHTL service life extension.	RS Robinson	WT Thompson
3K	Direct Rev. – (Page Change) – ECN-725247-R1; Appendix D to incorporate Department of Ecology Comments	RS Robinson	MR Koch
4	Direct Rev. – ECN-725247-R2	RS Robinson	WT Thompson
5	Direct Rev. – ECN-725668-R0	RS Robinson	WT Thompson
5A	Direct Rev. – (Page Change) – ECN-726124-R0; Updates page A-19 and A-32A to reflect waste removal from the C-104 heel pit.	JR Bellomy	MJ Sutey
5B	Direct Rev.-(Page Change)- ECN-726124-R1; Remove pages A-19A and A-32A (added per ECN-726124-R0)	JR Bellomy	MJ Sutey
5C	Direct Rev.-(Page Change) – ECN-725221-R0; Add pages A-19A through A-19D and pages A-32A and A-32B.	JR Bellomy	MJ Sutey
6	Direct Rev – ECN-726742-R0; Incorporates ECN-725221-R0 and deletes hoses removed from the field.	MF Erhart	TR Farris
6A	Direct Rev. – ECN 10-001076; Replace page A-15 and add pages 18A and 33A.	MF Erhart	WB Barton
6B	Direct Rev. – ECN-10-001119; Replace page A-13 and add pages A-18B, A-18C, A-33B, and A-33C	MF Erhart	WB Barton
6C	Direct Rev. – ECN-10-001227; Add Page A-16A, A-16B, A-18D, A-33D, A-33E and A-33F	JR Bellomy	RE Bauer

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6D	Direct Rev. – ECN-11-002040; Replace page A-10 to A-13, A-27, A-34, and A-39; add pages A-11A and A-13A	JR Bellomy 11/23/2011	RE Bauer 12/6/2011
6E	Direct Rev. – ECN-11-001852; Replace pages A-10 to A-12, A-13A, and A-27 to A-28. Change required for C-109 hard heel retrieval.	TM Green 3/20/2012	WB Barton 4/17/2012
6F	Direct Rev. – ECN-12-000361; Replace pages A-10 to A-12, A-13A, and A-27 to A-28. Change to remove RPP-HOLD-51347.	TM Green 5/02/2012	WB Barton 5/04/2012
6G	Direct Rev. – ECN-12-000129; Replace pages A-10, A-11A, A-26, A-31 and A-38. Change to reflect HIHTL replacement between POR104 and AN-06A.	TM Green 9/17/2012	WB Barton 9/19/2012
6H	Direct Rev. – ECN-11-000242; Replace page A-16A and add pages A-16C & A-18E. Change required for C-101 bulk retrieval	CH Anderson 11/19/12	RE Bauer 11/20/12
6I	Direct Rev. –ECN-11-001820; Add pages A-18F, and A-33H; restore A-16A (Rev. 6C) and re-number A-16A (Rev. 6H) as A-16B. Show page A-16C as no longer used. Updated pit location on page A-15.	CH Anderson 12/19/12	RE Bauer 12/20/12
6J	Direct Rev. – ECN-13-000011; Replace pages A-10, A-15, A-16A, A-33D, A-33F & A-34. Change required for C-112 retrieval.	MF Erhart 3/04/13	RE Bauer 3/07/13
6K	Direct Rev. – ECN-13-000008; Replace pages A-13A and A-34. Adds pages A-18G, A-18H and A-33I. Change required for C-105 retrieval.	MR Landon 7/25/13	CJ Alderman 7/29/13
6L RS	Direct Rev. – (Page Change) – ECN-13-000226; Replace page A-18A and A-33D. Change required for C-111 Hard Heel Retrieval	MF Erhart MF Erhart 8-28-2013	~~CJ Alderman~~ ~~WB Barton~~ 8-28-13 WB Barton

Table A-1. In-Pit Leak Detection Methods and Limitations.

Pit			Leak Detection			
Pit Location	**Pit Type**	**Transfer Line Type, EIN, and Connecting Pit**	**Device**	**Method**	**Modification**	**Limitation**
C-111	ERSS Sluice Box #1	Hose-in-Hose Transfer line I-01537-0-01 (2-Way Splitter Box POR303)	In-Line Leak Detector (H-2-34965-010) Riser 6 Install per ECN-13-000212	Waste pools and leak detector alarms after 1" accumulation in sluice box floor.	Drain plug is installed to aid in liquid accumulation. To remove liquid, the drain plugs are temporarily removed.	Waste must fill the encasement hose before filling the pit. A test was performed to show the leak detector will alarm at TBD gpm in TBD minutes, TBD seconds. Ref. TFC-WO-TBD [RPP-TBD-55744]
C-111	Saltwell Pump Pit	Hose-in-Hose Transfer Line I-01537-0-02 (2-Way Splitter Box POR303)	In-Line Leak Detector (H-2-34965-010) Riser 13 Install per ECN-726260-RO.	Waste pools and leak detector alarms after 1" accumulation in pit floor.	Drain is covered to aid in liquid accumulation. Sump pump used to remove accumulated waste.	Waste must fill the encasement hose before filling the pit. A test was performed to show the leak detector will alarm at 1.75 gpm in 4 minutes, 17 seconds. Ref. TFC-WO-09-4977
C-111	ERSS Sluice Box #2	Hose-in-Hose Transfer line I-07243-0-03 (Diversion Box POR134)	In-Line Leak Detector (H-2-34965-010) Riser 3 Install per ECN-13-000211	Waste pools and leak detector alarms after 1" accumulation in sluice box floor.	Drain plug is installed to aid in liquid accumulation. To remove liquid, the drain plugs are temporarily removed.	Waste must fill the encasement hose before filling the pit. A test was performed to show the leak detector will alarm at TBD gpm in TBD minutes, TBD seconds. Ref. TFC-WO-TBD [RPP-TBD-55744]

Table A-2. Transfer Line and Pit Hold-up/Estimated Time for Leak Detection.

A	B	C	D	E	F	G	H	I	J	K	L	M
Hose					Pit				Total Volume and Time @ 2 gpm			
Transfer Line Type and EIN[1]	Transfer Line Length (ft)	Hold-up Volume of 4-in. annulus (gal)[2]	Time to fill hose @ 2 gpm Leak (min)	HIHTL Assembly Drawing	Pit	Hold-up Volume of 1 in. (gal)	Time to Fill Pit to1 in. (min)[3]	Pit Drawing	Total Hold-up Volume (Col C+G) (gal)	Total Time (Col D+H) (min)	Total Time (hr)	Min. Detectable Leak Rate in Pit [4] (gpm)
HIHTL I-07243-0-01 Hose #14	365	125.6	62.8	H-14-107326	POR134 Diversion Box	108.6	54.3	H-14-107391	234.2	117.1	1.95	0.16
					POR303 2-Way Splitter Box	46.0	23.0	H-14-109295	171.6	85.8	1.43	0.12
HIHTL I-07243-0-02 Hose #15	365	125.6	62.8	H-14-107326	POR134 Diversion Box	108.6	108.6[7]	H-14-107391	234.2	171.4	2.86	0.16
					POR117 TVFM Box	21.1	21.1[7]	H-14-107904	146.7	83.9	1.40	0.10
HIHTL I-07243-0-03 Hose #16	335	115.3	57.6	H-14-107326	POR134 Diversion Box	108.6	54.3	H-14-107391	223.9	111.9	1.87	0.16
					C-111 ERSS Sluice Box at Riser-003	11.7	5.8	H-14-109783	127	63.4	1.06	0.09
HIHTL I-01537-0-01 Hose #20	75	25.8	12.9	H-14-107326	POR303 2-Way Splitter Box	46.0	23.0	H-14-109295	71.8	35.9	0.60	0.05
					C-111 ERSS Sluice Box at Riser-006	11.7	5.8	H-14-109783	37.5	18.7	0.31	0.03

Temporary Waste Transfer Line Management Program Plan

Author Name:
JS Boettger
Washington River Protection Solutions

Richland, WA 99352
U.S. Department of Energy Contract DE-AC27-08RV14800

EDT/ECN: ECN-14-000437 UC:
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Key Words: Transfer Line, Hose in Hose Transfer Line, HIHTL, Management Program, Leak Detection

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APPROVED
By marguerite washington at 1:44 pm, Jun 04, 2014
Release Approval Date

DATE:
Jun 04, 2014
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Approved For Public Release

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3	Direct Rev – ECN-721019-R3; Incorporates ECN-721019-R2 and includes C-200 and U-200 HIHTL configuration modification.	DG Baide	WT Thompson
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3C	Direct Rev – (Page Change) – ECN-722908-R1; Update C-03B Leak Rate based upon testing.	JR Bellomy	WT Thompson
3D	Direct Rev – (Page Change) – ECN-723678-R0; Update Rad Requirements	DB Parkman	WT Thompson
3E	Direct Rev – (Page Change) – ECN-723966-R0; Update pages A-21, A-23 and A-39 to show Vacuum Return HIHTL.	DB Parkman	WT Thompson
3F	Direct Rev – (Page Change) – ECN-723881-R0; Adds Page A-23C, A-23D and A-36C. NOTE: Pages A-23A, A-23B, A-36A and A-36B have already been added by ECN-722908-R1.	RS Robinson	WT Thompson
3G	Direct Rev. - (Page Change) – ECN-724101, R2; Update information from removal of SY/PPP HIHTL	MH Brown	CW Jorgensen
3H	Direct Rev. - (Page Change) – ECN-723881-R1; Update pages A-23C and A-36C (Ref. ECN-723881-R0) to reflect new location of POR104 leak detector.	JR Bellomy	WT Thompson
3I	Direct Rev. - (Page Change) – ECN-724610-R0; Adds pages A-23E & F and A-36D to reflect waste retrieval of C-109.	JR Bellomy	WT Thompson
3J	Direct Rev. – (Page Change) – ECN-725247-R0; Revises page A-5 and adds Appendix D to allow HIHTL service life extension.	RS Robinson	WT Thompson
3K	Direct Rev. – (Page Change) – ECN-725247-R1; Appendix D to incorporate Department of Ecology Comments	RS Robinson	MR Koch
4	Direct Rev. – ECN-725247-R2	RS Robinson	WT Thompson
5	Direct Rev. – ECN-725668-R0	RS Robinson	WT Thompson
5A	Direct Rev. – (Page Change) – ECN-726124-R0; Updates page A-19 and A-32A to reflect waste removal from the C-104 heel pit.	JR Bellomy	MJ Sutey
5B	Direct Rev.-(Page Change)- ECN-726124-R1; Remove pages A-19A and A-32A (added per ECN-726124-R0)	JR Bellomy	MJ Sutey
5C	Direct Rev.-(Page Change) – ECN-725221-R0; Add pages A-19A through A-19D and pages A-32A and A-32B.	JR Bellomy	MJ Sutey
6	Direct Rev – ECN-726742-R0; Incorporates ECN-725221-R0 and deletes hoses removed from the field.	MF Erhart	TR Farris
6A	Direct Rev. – ECN 10-001076; Replace page A-15 and add pages 18A and 33A.	MF Erhart	WB Barton
6B	Direct Rev. – ECN-10-001119; Replace page A-13 and add pages A-18B, A-18C, A-33B, and A-33C	MF Erhart	WB Barton
6C	Direct Rev. – ECN-10-001227; Add Page A-16A, A-16B, A-18D, A-33D, A-33E and A-33F	JR Bellomy	RE Bauer

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6D	Direct Rev. – ECN-11-002040; Replace page A-10 to A-13, A-27, A-34, and A-39; add pages A-11A and A-13A	JR Bellomy 11/23/2011	RE Bauer 12/6/2011
6E	Direct Rev. – ECN-11-001852; Replace pages A-10 to A-12, A-13A, and A-27 to A-28. Change required for C-109 hard heel retrieval.	TM Green 3/20/2012	WB Barton 4/17/2012
6F	Direct Rev. – ECN-12-000361; Replace pages A-10 to A-12, A-13A, and A-27 to A-28. Change to remove RPP-HOLD-51347.	TM Green 5/02/2012	WB Barton 5/04/2012
6G	Direct Rev. – ECN-12-000129; Replace pages A-10, A-11A, A-26, A-31 and A-38. Change to reflect HIHTL replacement between POR104 and AN-06A.	TM Green 9/17/2012	WB Barton 9/19/2012
6H	Direct Rev. – ECN-11-000242; Replace page A-16A and add pages A-16C & A-18E. Change required for C-101 bulk retrieval	CH Anderson 11/19/12	RE Bauer 11/20/12
6I	Direct Rev. –ECN-11-001820; Add pages A-18F, and A-33H; restore A-16A (Rev. 6C) and re-number A-16A (Rev. 6H) as A-16B. Show page A-16C as no longer used. Updated pit location on page A-15.	CH Anderson 12/19/12	RE Bauer 12/20/12
6J	Direct Rev. – ECN-13-000011; Replace pages A-10, A-15, A-16A, A-33D, A-33F & A-34. Change required for C-112 retrieval.	MF Erhart 3/04/13	RE Bauer 3/07/13
6K	Direct Rev. – ECN-13-000008; Replace pages A-13A and A-34. Adds pages A-18G, A-18H and A-33I. Change required for C-105 retrieval.	MR Landon 7/25/13	CJ Alderman 7/29/13
6L	Direct Rev. – ECN-13-000226; Replace page A-18A and A-33D. Change required for C-111 Hard Heel Retrieval	MF Erhart 8/28/13	WB Barton 8/28/13
6M RS	Direct Rev. – ECN-13-000226; Replace page A-18A. Change required for C-111 Hard Heel Retrieval	JS Boettger 6/2/13	KE Carpenter 6/3/14

Table A-1. In-Pit Leak Detection Methods and Limitations.

Pit			Leak Detection			
Pit Location	Pit Type	Transfer Line Type, EIN, and Connecting Pit	Device	Method	Modification	Limitation
C-111	ERSS Sluice Box #1	Hose-in-Hose Transfer Line I-01537-0-01 (2-Way Splitter Box POR303)	In-Line Leak Detector (H-2-34965-010) Riser 6 Install per ECN-13-000212	Waste pools and leak detector alarms after 1" accumulation in sluice box floor.	Drain plug is installed to aid in liquid accumulation. To remove liquid, the drain plugs are temporarily removed.	Waste must fill the encasement hose before filling the sluice box. A test was performed to show the leak detector will alarm at 1.8 gpm in 3 minutes, 48 seconds. Ref. TFC-WO-13-3389, Attachment 6.
C-111	Saltwell Pump Pit	Hose-in-Hose Transfer Line I-01537-0-02 (2-Way Splitter Box POR303)	In-Line Leak Detector (H-2-34965-010) Riser 13 Install per ECN-726260-R0	Waste pools and leak detector alarms after 1" accumulation in pit floor.	Drain is covered to aid in liquid accumulation. Sump pump used to remove accumulated waste.	Waste must fill the encasement hose before filling the pit. A test was performed to show the leak detector will alarm at 1.75 gpm in 4 minutes, 17 seconds. Ref. TFC-WO-09-4977
C-111	ERSS Sluice Box #2	Hose-in-Hose Transfer Line I-07243-0-03 (Diversion Box POR134)	In-Line Leak Detector (H-2-34965-010) Riser 3 Install per ECN-13-000211	Waste pools and leak detector alarms after 1" accumulation in sluice box floor.	Drain plug is installed to aid in liquid accumulation. To remove liquid, the drain plugs are temporarily removed.	Waste must fill the encasement hose before filling the sluice box. A test was performed to show the leak detector will alarm at 1.8 gpm in 3 minutes, 0 seconds. Ref. TFC-WO-13-3388, Attachment 6.